

MICHIGAN FARMER

AND STATE JOURNAL OF AGRICULTURE.

GIBBONS BROTHERS, Publishers.

DETROIT, MONDAY, SEPTEMBER 5, 1887--WITH HOUSEHOLD SUPPLEMENT.

PRICE \$1.50 PER YEAR.

VOLUME XVIII.

PRACTICE WITH THEORY AND SCIENCE!

NUMBER 38.

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visers, and woman's conscience must continue to be troubled.

A. C. Glidden thought the shortcomings and sore consciences of housekeepers were occasioned by an effort to do more than reason required. The things attempted should be done well, but there was a limit to endurance. The essentials should be selected and performed, and those things for which there was really no time nor strength, should be left untried.

D. Woodman said any person can do their work well, better and easier than half do it. Women sometimes spend more time than is really necessary in order to satisfy what they call conscience. But many of their troubles and shortcomings are imaginary. The defects over which so much grief is caused never appear at the surface to trouble any one except the housewife herself.

The next topic was "Labor," presented by Walter R. Leigh. Its statement of facts and the suggestions were well put, but the discussion was not so animated as upon other questions.

W. J. Coy said one thing must be stamped out in this country—the idea that a few men shall determine that another few shall not labor when they desire to.

E. P. Mills—Labor is honorable to all mankind, and it is a curse not to be employed. We ought to be thankful that the productions of the earth do not spring up spontaneously and naturally. The labor required is that we separate from our barbarians.

J. J. Woodman—If \$500,000,000—the price paid for rum—were poured out to supply the wants of the needy, the storehouses would be empty, and the piled up merchandise go to supply the wants of the hungry and unclothed. This would solve the labor problem. The saloon must go.

"Our Foreign Population," by C. H. Butler, was a carefully prepared paper, showing the present and prospective dangers which unrestricted immigration is likely to bring.

Mrs. Jennie Averill said restricted immigration had been her hobby for a long time, and though the difficulties attending the labor question hinged mainly upon this issue.

James Hale had a consciousness that he

when a boy in England he carved an eagle for an ornament to a book-case, and that eagle has since been his emblem.

Mr. Buskirk said one of the fundamental principles of the immigrant was to be against the government. The tyranny under which he has grown has developed that prejudice in him, and he is naturally an enemy of good government from the start.

C. Wilsey said many of the emigrants are truly American on arrival. We ought to discriminate as to whom we should allow to land. They should be educated in their own language at least. As long as strikes are possible, or even probable, we want workers to fill their places.

N. H. Bangs—No foreigner should be allowed to vote until he has been here long enough to acquire the American title to vote.

D. Woodman—It is time that pauper immigration at least should be stopped. Government under the control of foreigners is always corrupt, as witness city governments that are controlled by the votes of the foreign element.

W. J. Coy—Restricted immigration laws would take one dangerous feature out of politics.

E. A. Wildy—Statistics show that the greater proportion of emigrants from England and Ireland are males, and from France females. The development of mines and the building of railroads could never have been accomplished without foreign labor. The State of Texas alone could sustain more than half our present population. As long as we raise grain for export, we can bring consumers here to feed cheaper than we can send feed to them.

Mrs. E. B. Welch thought it depended much upon what kind of husband the wife has whether any of those things can be put off.

Mrs. H. Randolph thought it best to perform the duties of the household according to the very best of our judgment, and let people talk if they choose to do so.

Mrs. N. H. Bangs, referring to the idea contained in the paper that wives in town households have less care and fewer trials, said we may go a little further and say there is not the distance between farmers' wives and those living in the town. Exclusively fine housekeeping is not so common—we do not aspire to perfection in such matters, as it was once understood.

Mrs. Consuls said it had long been a question with her where we shall leave off, when shall remain undone and satisfy our conscience.

Mrs. H. Randolph—As a government and as a people we should be consistent. Our laws were made, and emigration comes under them, and we must protect those we have, but change the emigration laws so as to prevent such as cannot keep themselves from coming. We could vote the sallow out of existence were it not for these irresponsible people. Would let no person vote, whether foreign or native born, who could not read our Declaration of Independence.

T. R. Harrison could hardly divert himself from the idea that he was in a Know-Nothing lodge again. Thoughtful men

years ago were considering the same question: How shall we legislate to control this dangerous element. Thinks we cannot shut out immigration entirely, but we can control them after they are landed, and must. With this centralization of population in large cities comes a real danger which must be met. There would have been no Tweed, Sharp, or boodle rascality possible except for the foreign vote. A property qualification for voters is the wisest course. If those who threw shells in the Haymarket riots of Chicago had owned

property in that locality, no bombs would have been thrown. This is the question of the hour. Deal with foreign criminals vigorously. Hang the unhung, and do not make them voters at all.

E. Woodman—Some foreign countries themselves prohibit young men from emigrating; they want them for soldiers or priests. The trouble is we don't sit down on crime hard enough. 'Tis we follow them if they once get to America; they can be at liberty to do as they please. Once show them that we hang criminals, and it will have a tendency to keep down crime. If a tramp comes along, put a ball and chain on his leg, and set him to pounding stone, and there would be fewer tramps.

"Corporations," by E. A. Wildy, was a thoughtful paper, combining figures, statistics and arguments, but its discussion was short for want of time.

A "Poem," by Mrs. E. Woodman, will be found in the HOUSEHOLD. This closed one of the most interesting farmers' meetings ever held here, and for the scope of territory included in the membership, I challenge the State to surpass it.

A. C. G.

THE UHL SALE OF SHORT-HORNS.

The public sale of Shorthorns by D. M. Uhl, of Ypsilanti, on Wednesday last, drew out a large attendance of farmers and stock-breeders.

The prices realized on those sold were satisfactory for the season, but five females and bulls had to be withdrawn.

The cattle sold entirely upon their individual merits. The following is a list of the animals sold, their purchasers, and the price realized:

Beauty of Brookside by Mazurka Prince 1728, out of Fl. Irene by De Grey 6594—D. L. Quirk, Ypsilanti. Price, \$130.

Lucy 2d, by Lodi 39624, out of Lucy by Duke 16679—B. Kelley, Ypsilanti. Price, \$82.

Josephine, by Plumwood Lad K. 27453, out of Frosty by Duke 16679—John Koch, Pittsfield. Price, \$110.

Lena and calf, by Plumwood Lad K. 27453, out of Brookside Maid by Mazurka Prince—Reuben Hueston, Ypsilanti. Price, \$135.

Strawberry Plantations.

Vetinary—Foot Rot and Foul in the Feet of Sheep—Split Hoof, "Sand Cracks."

Commercial.

Agricultural.

AN INTERESTING MEETING.

A Joint Meeting of the East and West and Antwerp and Paw Paw Farmers Clubs.

Each member of the Farmers' Association received through the mail about a week ago, a tastefully folded and illustrated programme, with the following on the first page or ornamented cover, "The East and West Farmers' Club, to Antwerp and Paw Paw presence" "at a meeting of the Society at the residence of Mr. and Mrs. Ed. Bissell, Thursday, August 25th, 1887." Then followed the names of the several committees, and on the third page was the regular programme. This consisted of "Roll call—response by sentinel," Song; Address of Welcome by the President, G. W. Hunt; Recitation, "The Woman of To-Day," by Mrs. E. A. Wildy; Song, W. H. Wilson; Paper, "The Farmer's Wife and her Conscience." I shall forego any allusion to this issue.

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Haymarket riots of Chicago had owned

records of the Lady Littleton family, and we find here associated in one herd prizes for all. In this connection, we would say that the Rose of Sharon tribe exceeds the sum of all the rest, while the Rose of Richland branch has a reputation of its own that is most enviable. For further particulars concerning them we refer our readers to the "Breeds of Live-Stock," wherein three representatives of this tribe are employed to convey to the public mind the idea of the perfection of a Rose of Richland.

The interesting feature to buyers in regard to this great sale, is the fact that everything is conspiring to keep the prices down, except the innate quality of the cattle. Cockrill has sold his farm, making it impossible to keep the cattle longer, the drought of the past summer has cut short the whole time when he could not have made any inquiry about his work, in any particular, and have received prompt and courteous attention. He saw those methods, believed to be the best in vogue, practiced; he had the privilege of studying critically, if he had chosen to do so, the breeds of cattle, sheep and swine kept on the farm. Everything was for his use, and with all of these facilities at his command, in which hired laborers laid the tile. The student receives no more instruction than the farmer gives his hired hand. I leave the intelligent reader to draw his own conclusions, merely remarking that Mr. Jason Woodman, in the letter published last week, refers to a class who, perhaps, may need different "agricultural instruction" from that required by those who are to be farmers, and possibly Mr. Waldron may be classed with these, as I believe he is to be a civil engineer.

The demand made by Prof. Johnson for

the investigation of the Department of Agriculture was not made until the charges drawn up and signed by the students had been presented to the State Board. The idea of an investigation was originally with the students, and after the investigation seemed inevitable, then and not till then did Prof. Johnson demand it. If you still insist that the result of the investigation was favorable to Prof. Johnson, I refer you to the report made by the State Board.

I will state, and if you so desire, can prove that the students

fail to sustain a majority of the charges.

The prime movers in this investigation comprised the class of '88 and that class was not in the least connected with the removal of the professor to whom you refer. They looked for no "victim," but honestly and openly worked for a reform in the agricultural department.

Bell Duchess of Brookside 3d, by 2d Bell Duke of Milford 54738, out of Clara by Plumwood Lad K. 27453—R. Crittendon, Price, \$107.

Bell Duchess of Brookside 5th, by 2d Bell Duke of Milford 54738, out of Red Lady 2d by Duke 16679—D. L. Quirk, Ypsilanti. Price, \$107.

Bell Duchess of Brookside 6th, by 2d Bell Duke of Milford 54738, out of Elmira by Plumwood Lad K. 27453—R. W. Hemph

The Horse.

PATRON WINS.

The event of the past week in trotting circles was the trot for the \$10,000 purse over the Charter Oak Park at Hartford, Conn., on Wednesday last. As predicted, Patron was an easy winner. He never had to extend himself, not one of his competitors ever reaching him after the first quarter in each heat. The pools were selling at \$100 on Patron to \$15 on the field. Prince Wilkes proved himself next to Patron the best in the race, and led in the pools for second place after Patron's success in the opening heat barred him out of the pool stands. Twelve thousand people witnessed the event, including delegations of turfmen from all the large cities in the section and many from the west. The track was in fine condition, but the air a trifle too cool for fast work and the skies shovery before the race was finished. Patron was driven by George Fuller, Loretta F. by Bud Dobie, Prince Wilkes by Crit Davis, Astral by Frank Van Ness, Myrtle by Carey, and Dan by Woodnut. In the first heat Loretta F. had the pole, with Patron next, and he promptly took it from her at the turn and went to the quarter in :35. Astral second, Wilkes third. Wilkes went up to second at the half, where Patron led a length in 1:09. Coming home Wilkes and Astral closed upon Patron, but he drew away sharply coming to the wire and won by two lengths in 2:17 1/4.

The second heat witnessed a very even start. Patron repeated his fast work to the turn, but Wilkes was at his side and Astral at Prince's wheel. Patron went to the quarter in :35 1/4, a length ahead of Prince, who, with Astral, then made a grand neck and neck race along the back stretch, and when Patron passed the half in 1:09 Wilkes was a good second. There was some shifting through the rest of the heat, which Patron won by an open length in 2:17, with Wilkes second.

A heavy shower just before the third heat made the track a trifle heavy, but the sun was bright when the horses got away, with Patron making another of his spurts from the wire, and Loretta on his flank. The pace sent her in the air and Astral took second. Patron led four lengths at the quarter in :35 1/4. Along the back stretch Prince Wilkes by fine square work shifted up to second place, but was six lengths back of Patron at the half in 1:09. Patron was sent sharply in the last half at a 2:14 gait, and indications were that he intended to shut the others out. He drew away very fast, but was then held to avoid distancing the field, and finished winner of heat and race in a jog by a dozen lengths in 2:18, with Prince second and Dan distanced. The following is the summary:

SPECIAL STAKE RACE—PURSE \$10,000.
G. Fuller's s. Patron. 1 1
Crit Davis' c. b. Prince Wilkes. 2 2
Frank Van Ness' b. m. Astral. 3 3
P. F. Carey's b. m. Merle. 4 4
H. C. Woodnut's ch. g. Dan. 6 6
Time—2:17 1/4; 2:17; 2:18.

This victory rounds up Patron's record for the year, and stamps him as the greatest trotting stallion ever on the track. He is now five years old, and was bred in Kentucky. His sire, Pancoast, has a record of 2:21 1/4, and his grandsire, Woodford Mambrino, made a record of 2:21 1/4 when he was 16 years old, and with very little training. The sire of Woodford Mambrino was Mambrino Chief, the horse that got Lady Thorne, whose mile in 2:18 1/4 was a wonderful performance at the time she was on the turf. Her dam is a full sister to the famous filly Alivra, that, when a four-year-old, trotted in 2:18 1/4, making what was then the best record for a horse of her age, although a four-year-old has since trotted in 2:16. The dam of Patron was, at two years old, as fast as her afterward famous sister, but, being put to breeding, her speed was never developed. She was sired by Cuyler, a son of Rydyl's Hambletonian. When Patron was a yearling he was purchased for \$800 by a Canadian who had a fancy for trotters. Patron was left in Kentucky to be developed by G. J. Fuller, a well-known trainer, who has ever since had charge of him. As a two-year-old he won a race for horses of his age, making a record of 2:42 1/2. The following spring he developed into the fastest three-year-old that had ever been seen in Kentucky—in the fall of 1885, at Lexington, Ky., beating Silverton and Granby in 2:20 1/4, 2:25, and 2:19 1/4. He appeared but twice in 1886, having injured himself early in the season. Last fall C. F. Emery of Cleveland, O., purchased a half interest in Patron for \$12,500. In his first race this summer Patron was beaten, but the following week he defeated Arab and several other noted horses in fast time over a slow track. Then he went to Detroit, where he won his race with ease, making a record of 2:16 in the third heat, this being the fastest time ever made by a five-year-old stallion. The result of this race was that a special race was made between Patron and Harry Wilkes, the latter having a record of 2:18 1/4, to be trotted at Cleveland the following week. Harry Wilkes was a favorite in the betting, but Patron defeated him easily, and in the third heat trotted the mile in 2:43.

ARTISTIC HORSE-SHOING.

This is the title of a little work just issued by Prof. Geo. E. Rich, of New York, which we have examined with a great deal of pleasure and interest. It is on a subject which is of vital interest to every one who owns a horse, and is written in plain and terse language which leaves nothing to be desired. It is a book which recommends itself. An extract from the chapter on "Fitting the Shoe to the Foot" will show the style of the author, and set horse owners to thinking:

"This is one of the most important points in horse-shoeing. In traveling about giving instruction to all classes of people, I have found a great many so-called horse-shoers who had not worked at the trade more than six months perhaps. Often as quick as a man gets so that he can dress a foot or fit up a shoe he calls himself a good horse-shoer and will start a shop. In order to secure work it is necessary for such a man to put prices down very low. In my experience I have found that two-thirds of the crippled horses have been made so by just such horse-shoers as I have described above. I call them

horse-shoers for convenience only. Some of them will never be horse-shoers. Nevertheless they think when they put a shoe on, it is as good work as anybody can do, and usually such men are veryaverse to learning how to shoe. I commenced helping my father at the forge when only eleven years old and have worked at the trade ever since, and I think it safe to say I shoe horses fully twenty years before I really knew anything about it. Now somebody will ask, how is it possible that you could work so long without knowing anything about horse-shoeing? It is simply because I knew it all in the first place. I knew so much that I did not want to be told anything, and so went on year after year in the same old rut, doing more harm than good all the time.

"After I had been compelled to pay for three valuable horses I spilt by bad shoeing, it occurred to me I did not know as much as I thought I did. Then I invested every dollar I was worth and made an effort to learn how to shoe horses. I sought the best instructors I could hear of and found out that I had been all wrong in what I had been doing.

"No man should be permitted to shoe a horse who has not passed an examination by a competent board appointed for the purpose. He should be compelled to study the horse's foot and understand it before being permitted to set a shoe.

"A great many horse owners ruin their horses by taking them to men who know nothing whatever about the anatomy of the foot. The main idea of the average horse owner seems to seek out and patronize the man who will shoe the cheapest and make the shoes last the longest, and they don't hesitate to call such a man a good horse-shoer. Very few probably know that a valuable horse may be completely ruined by an incompetent man in two or three shoeings. Some horses will stand poor shoeing for quite a while, but in the end they are sure to be injured.

"No frog, no foot; no foot, no horse," is a true saying. I claim that no horse should go over four weeks without having the shoes removed and the dry feverish growth of the hoof rasped away; that portion that would wear out naturally if the horse was not shot at all."

The Nerve-Power of Oats.

Oats are said, by a scientist who has brought his battery to bear on a horse, to have an exciting power. The effects on the nerves and muscles were tested after eating oats and compared with their excitability before eating. Old horsemen know that oats will make a horse more lively or active than other grain. They contain nerve and muscle food, or the elements to supply the wear and waste of these parts, and no doubt they stimulate them also. They contain, according to this authority, a nitrogenized substance peculiar to themselves. All oats contain this peculiar property, but the black oats have the most. When oats are ground the exciting effect is reduced in strength and duration, but its effects are more active. This peculiar substance is called avenine. The soil where oats are grown makes a difference in the amount of avenine produced.

In giving an account of his experience, Dr. McIntosh says stimulants have been recommended and given by other veterinarians, but the treatment was not carried far enough. It is the giving of the large quantities of aromatic spirits of ammonia and the spirits of nitrous ether combined act something like a specific. Ten ounces of the ammonia are shaken up with 20 ounces of the ether, the whole divided into doses of three ounces each, and one of them is given every half-hour in a half-pint of cold water, till five doses have been administered; then a similar dose is given every hour.

At the same time one pound of Epsom salts is dissolved in a half-gallon of cold water, an ounce of ground ginger is added, and administered as a drench. Besides, a pound and a half of Durham mustard is wet up in warm water and applied over the loins, with a thick cloth rung out hot, covering the parts. After this course of treatment, the patient lies quiet for six or seven hours and then rises of her own accord. No further medication is necessary except, for a few days thereafter, to give, three times a day a warm gruel, drawn to give the intestine of nux vomica.

One of the most novel things in the way of marketing I have yet seen, says *Vinton's Gazette*, is the disposal of portions of fowls. I know that at Paris half-fowls can be bought, and in Bordeaux the system is carried farther. In the central market, which is built in octagonal form, the convenience of which I refer to another time, I noticed peculiar carcasses being hung up on the stalls—carcasses whose leading characteristic seemed to be the absence of meat. There were no legs, or wings, or breast, but on a closer examination we found that the stalk contained these portions, offered for sale separately. We were asked a franc for the breast of a fowl, but did not inquire the price of the legs and wings. Thus the Bordeaux house-keeper, able as most of the French are to make a fine dish with little meat, can buy a leg or a wing, or, on a special occasion, breast, and need buy no more; and those who like bone-picking will find meat to suit them.

Out in Dakota they seem to think which only bears one ear to a stalk is "no great shakes." A farmer of Vermillion placed on exhibition at that place a stalk of "squaw" corn having four well-developed ears, still another brought in one bearing five ears which together weighed a dozen pounds.

Hoard's Dairymen, in common with most other agricultural journals, recommends feeding meal with cut feed—straw or hay, well wetted and the meal mixed with it.

Digestion is more complete, more feed is saved, and animals fatten more quickly upon it.

Meal produces when fed more meat than can be digested.

When to Cut Brush.

When to clear land of its timber and brush growth so that the work shall be more effective is an important question. In a wooded country, this is the first step towards making a farm and the labor often costs more than did the land. And when once the growth is cleared off from the surface the master is not ended, for the roots will often continue to send up sprouts much to the farmer's annoyance, and "sprouting" must be resorted to year after year until the sprouts finally become discouraged and die.

There is a time however, when brush can be cut and the roots die so that no sprouts will come up. August is usually mentioned as that time, but that is a little too indefinite.

To understand when it is the best time for clearing land it is necessary to know something of the habits of plant growth, particularly of those we seek to kill.

These plants are mainly perennial in growth, that is they exist and grow from year to year. Growth is carried on mainly through the roots and leaves, the former acting as the collector of food which gather in the soluble and crude form and send it up through the stem and branches to the leaves, where with the aid of sunlight, etc., it is properly prepared for plant growth, and is then distributed to all parts of the plant and under the influence of vitality formed into wood, leaf, flower or fruit.

The observant person will have noticed that the most rapid growth of trees is when they first start in the spring. We speak of the "unfolding of the leaves" (which in a sense is correct) and "flowers bursting into bloom," expressions which show how rapid is vegetable growth at that time. Sometimes we see this growth beginning even before the ground is free from frost and the roots can gather any food. Whence comes the food then, that makes the growth?

From the plant itself. In other words there was a supply of food gathered by the roots,

prepared by the leaves and stored up along the trunk and branches during the previous season for use at this time. Indeed the greater part of the growth made in one season, at least in the early part of it, is made from this food gathered and prepared the season before. And whenever that supply is exhausted the vitality of the tree is at its lowest ebb, and that is the easiest time to kill it. This will be in general in August, but different plants will differ as to the time, and much also depends on the season. In those plants which form terminal buds the formation of this bud is a good indication.

Plants that do not form a terminal bud

have a more continuous growth through the summer and it is harder to tell just the time when to cut; but by careful observation the best time can be determined which, in nearly all cases, will be after the vigorous growth of the spring and before the plant has prepared for another season of rest.

record 2:19 1/4, by Legal Tender Jr.: dam by Blue Bull, second dam by Pochahontas Boy. Eminence, three-year-old filly, record 2:29 1/4, by Empire, son of Mambrino Patchen: dam (the dam of C. F. Clay, 2:18), by Strathmore. Each of these four trotted; and three won first money, while the fourth won second.

The Farm.

Parturient Apoplexy.

Prof. McIntosh, veterinary professor at the Illinois University, gives the symptoms and treatment of this disease, so fatal to cows:

It usually occurs from a few hours after calving to the third day, and is seldom seen after that time. Cows in high condition and deep milkers are most liable to attack; but occasionally those in thin flesh and weakly are its victims. It is more common in old cows than in young, and in hot in cold weather. In the early stages the cow will be noticed shifting her weight from one hind leg to the other. This she does continually, and if compelled to move does so much that they will have to be turned out, and under the old treatment, seldom rose again. The breathing and pulses become quickened. As the disease advances the animal is affected, as shown by the animal tossing her head about in a violent manner. Then the eyes put on a glassy appearance and are insensitive to light, and a stage is reached where if active remedies are not resorted to the animal dies.

It is previous to this stage that Prof. McIntosh has found that heroic doses of the aromatic spirits of ammonia and the spirits of nitrous ether combined act something like a specific. Ten ounces of the ammonia are shaken up with 20 ounces of the ether, the whole divided into doses of three ounces each, and one of them is given every half-hour in a half-pint of cold water, till five doses have been administered; then a similar dose is given every hour.

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It is previous to this stage that Prof. McIntosh has found that heroic doses of the aromatic spirits of ammonia and the spirits of nitrous ether combined act something like a specific. Ten ounces of the ammonia are shaken up with 20 ounces of the ether, the whole divided into doses of three ounces each, and one of them is given every half-hour in a half-pint of cold water, till five doses have been administered; then a similar dose is given every hour.

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Horticultural.

For the Michigan Farmer.
**ALEGAN COUNTY POMOLOGICAL
CAL SOCIETY.**

The Allegan County Pomological Society held its August meeting at the farm residence of John Miller, in the town of Trowbridge. This farm is situated upon a range of hills overlooking the surrounding country for miles in every direction. This elevation renders it one of the best fruit farms in the township. Mr. Miller settled upon this farm twenty-three years ago, then almost an unbroken forest. He at once commenced battle with the giant trees, converting them into lumber, wood and rails. Not for one day did he falter or hesitate, but with axe and saw, with the aid of fire, did he make war upon the forest. Where once stood the beech, maple, whitewood, basswood and ash, peach, pear, plum and quince, are now cleared, fertile fields.

The fruit from this farm is annually on exhibition at our county fair, and often carries off valuable prizes. Mr. Miller and family, with this beautiful home, serve as an example of what can be done by industry and good management both in the house and on the farm.

The forenoon was spent in looking over the farm and fruit, when dinner was announced. If Mr. Miller had taken pride in exhibiting to us the result of his labor for years on the farm, he might be prouder still at the degree of perfection to which his wife and daughters had attained in the household department, as evidenced in the magnificent dinner spread for his guests. All this made our hearts glad and increased our faith in farm life.

At half past one o'clock p.m., President Past called the meeting to order, and stated that the subject for discussion was growing fruits.

Wm. B. Andrus was called upon to lead in the discussion, and said he usually attended the meetings of this society not to do the talking, but generally to exhibit samples of the various kinds of fruit that grew upon his farm. These samples were here for educational purposes, to be examined and compared, giving every one an opportunity to learn the peculiarities of each variety and their merits by actual test; as these samples were always distributed among those present at the close of the meeting. He had learned much in this manner from others. Had grown pears quite extensively for several years. His orchard stands on high ground; soil gravelly loam, somewhat stony. Had cultivated the orchard while young, until it came to bearing age. This cultivation had been done early in the season and always quite shallow. Since then has kept the orchard seeded to timothy grass. Kept the grass away from around the trees by digging or spading the ground and placing mulch around the trees. Had used salt, ashes, lime and old scraps of iron and tin under the trees. Had never suffered from blight. The trees had borne good crops of pears nearly every year. Had several varieties which he grew more for experiment than profit. The really profitable varieties for market were few; those which had paid him best were Clapp's favorite, Remond's beauty, Bartlett, Sheldon, Bosc and Vicar. There are some other kinds that do fairly well. Taints that too much manure, with cultivation and late growth, followed by cold winters, has something to do with the cause of blight. Whenever he finds a twig blighted he cuts it off. To grow pears successfully one must study the habits and needs of the pear tree, and treat it accordingly; this can only be learned by practical experience, and close observation.

President Past said he had four pear trees fifteen years old, had never given them any cultivation except mulching and digging away the grass, had placed ashes around them, and had thrown horse slops about under the trees; they were healthy free from blight, bearing quite regularly. O. C. Coker had two pear trees standing in sod, they have produced good crops of pears usually. Last year the fruit withered and dropped from the tree. This spring they put out fresh leaves and are now looking healthy, with a fair amount of fruit. —*Popular Gardening.*

Mushroom Notes.

The economic value of mushroom diet is placed as second to meat alone. With bread and mushrooms properly prepared, a person may neglect the butcher during the season when this growth may be gathered. Mushrooms, as Professor Palmer has stated, make the same use of the air we breathe as is made by animals; when cooked they resemble no other form of vegetable food, and in their odor in some cases cannot be distinguished from that of putrid meat. Certainly it is that the parasol-like growth used for food, and which springs up in a night, is not a plant in any sense. It is rather analogous to a flower, bearing, as it does, the spores that are analogous to seeds. The true plant which feeds, grows and finally prepares to flower, is the network of whitish threads which forms what is commonly known as the "spawn," or botanically the mycelium of the mushroom. It is to the garden or indoor culture of the common mushroom, *Agaricus campestris*, that we desire here to call attention. There is an ease and novelty about this business which should make it attractive, not only to all amateurs for home use, but to commercial gardeners near all large towns. Some of the largest profits the writer has ever made in gardening was by growing mushrooms under greenhouse benches in winter, and selling them. The conditions to success consist in growing them in very rich soil, the indispensable ingredient of which is horse manure, and in a steady temperature. Any place, such as a cellar, shed, greenhouse pit, space under the benches, etc., where either naturally or by artificial means, a temperature from 50 to 80 degrees may be had will answer. Good drainage must also be provided, hence a shelf, or a series of shelves, may readily be employed to hold beds. The manure ready, and it may at once be made into beds. The manure should be dry and freed as much as possible of straw or other litter by shaking out. Manure alone can be used which to grow them, by repeatedly treading it down and throwing over to get rid of its greatest heat, but usually it is preferred to mix from one-fourth its bulk to equal its bulk with good garden soil. It is best to allow something of an accumulation before putting down into beds. The bed may be of any shape or size desired, but experience proves that to have them from two to four feet wide and twenty inches deep answers about the best. Where there is a good deal of room it is well to make the beds more or less sloping at the sides. Beds may also be made in old tubs, in casks saved in two, or in boxes. In this way they could, after the making and for cropping, be carried into cellars or other parts of dwelling houses where one would not like to bring in the manure in its rough form. Something can be done by selection of varieties. Certain varieties of apples and pears suffer more by these blights than certain other varieties. The Flemish Beauty pear was one of the first to yield to the parasite that destroys the skin. The Red Astrachan is particularly susceptible to fungus attacks, and the fact that this variety has been very extensively planted, far beyond the needs of the market, and that thousands of bushels of the fruit are annually allowed to fall and rot on the ground, a sufficient explanation of the cause of the increased difficulty of getting fair crops.

If Old Subscriber will keep his grounds clear from decaying fruit and diseased fallen leaves for a few years, and his neighbors will do the same, there is little doubt that his fruit will be greatly improved in quality and appearance. This will probably look like a great undertaking, but it is just what some of the most successful fruit culturists have been doing for years, and they have found that their profits are measured in a large degree by the care they have bestowed upon their orchards in this direction. It is hoped that chemist will yet discover some kind of an application that will destroy parasitic growth without injuring the foliage of the trees. Let us sustain well our experiment stations in the prosecution of such investigations.

Decaying substances generally, are live plants possessing definite characteristics. And now we are learning that most of the blights and diseases of plants and many of the diseases of animals, including man, are caused by organized forms of life, which are governed by the same unchangeable laws that control all things in nature. Mould, rust and decay are produced by the seeds of mould, rust and decay, and if we would keep our food, grains and fruits secure we must learn to keep them beyond the reach of the seeds of destruction. Most of us have learned that the apple worm, the curculio, the tent caterpillar, the canker worm and the borer are all propagated from eggs or seeds, and by intelligent effort much can be done to keep these enemies in check, but the seeds of the blights and the fungi are too small for the common observer to study with ease, nevertheless we are learning something of these. We find that the apple rot is of several kinds, each distinct from one another as are the different contagious diseases of childhood, and as we have learned that typhoid fever, diphtheria, measles and like diseases, may be in a measure checked by observing cleanliness and sanitary laws, so we have learned that the rotting of our fruits may be checked by similar means. When we learn to gather up all the fallen fruit containing the eggs of insects or the germs of parasitic fungi and sweep together all the fungous spots and burn with fire, we shall have taken a step towards controlling these obstacles to successful fruit culture. Something can be done by selection of varieties. Certain varieties of apples and pears suffer more by these blights than certain other varieties. The Flemish Beauty pear was one of the first to yield to the parasite that destroys the skin. The Red Astrachan is particularly susceptible to fungus attacks, and the fact that this variety has been very extensively planted, far beyond the needs of the market, and that thousands of bushels of the fruit are annually allowed to fall and rot on the ground, a sufficient explanation of the cause of the increased difficulty of getting fair crops.

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Gardening by the Barrel.

The agricultural editor of the *Philadelphia Record* mentions a Jerseyman's practice which enables him with very little extra outlay to secure better results, especially in a season of drought, than from three times as much space devoted to vegetable-growing in the usual way.

"He procures old soap-boxes, flour-barrels, kegs, or anything that will hold water or manure, and if the boxes or barrels be somewhat rickety, so much the better. In planting melons, cucumbers, tomatoes, squashes or lim beans, he places in a box on the middle of the hill, which should be six feet across, fills it half full of fresh manure, and over the manure a half-peck of a mixture of wood ashes and superphosphate is placed. The seeds of the melons are planted around the box, four plants being allowed to the hill, the distance of the seeds from the box being about two feet, as to close contact with the box is not desirable. When the young plants are up, the seed and the pods during the winter were scattered over the garden. I never allowed a plant of it to bloom after that, but it took ten years to eradicate it from the garden. Two weeks ago I contracted to grow an acre of Valentine beans for a Cincinnati seedsman, he to furnish the seed. After they came up I discovered here and there a morning-glory plant among them and the leaves of the beans and morning-glories were so similar that we could not tell all of the latter; although I did my best to destroy them some of them went to seed. I have fought this pest ever since, and have kept it down so that not a square rod of this farm has been overrun by it, but I still find an occasional plant. Some careless neighbors have large fields completely overrun by this plant, so that it climbs to the top of the corn and obstructs the rows every year. I would not allow a man to sow a pint of this seed over a ten-acre field of milo if he would pay me \$100 for the privilege.

California Grapes and Wine.

The State Viticultural Board has received a sufficient number of reports from the wine growing sections of the State to warrant it, in the opinion of its officers, in making an estimate of the crop of 1887. The estimate foots up 16,700,000 gallons. Of this total it figures that 3,000,000 gallons will be distilled into brandy and 1,800,000 shipped in the shape of condensed must, leaving the actual amount of wine produced at 12,900,000 gallons. The actual amount of wine produced in 1886 is generally reckoned at 18,000,000 gallons, of which 3,000,000 went into brandy, leaving 15,000,000 available for export and consumption. If all these figures are correct the wine crop of this year will fall short of the crop of 1886 by 2,100,000 gallons. We leave the responsibility for these estimates to Mr. Wetmore, of the Viticultural Board, merely observing that others, perhaps as well informed as he, do not look forward to any such diminished product as this.

The diminution is all or nearly all in one county—Napa, which was credited with an output of 5,000,000 gallons last year, and only 3,000,000 gallons this. We have already taken occasion to express doubt of the accuracy of the reports which have been so industriously disseminated regarding the damage done to the grapes in Napa by *coulure* (the dropping of young grapes) and other causes. There is a good deal of wine made by insects and other enemies, but these are not so numerous as we are told. Old Subscriber can doubtless remember when western apples, even those grown in our own orchards, were sound and fair compared to those grown in the eastern states. Peaches also do quite well. It seems strange to gather peaches within fifty miles of Mackinaw, where six hundred miles south of there the cold of the previous winter had killed every peach-bud. The secret of the whole matter is the influence of the great lakes in tempering the atmosphere in winter, so that it is not so cold nor so dry as it is for many miles south of such influence. Grapes were just beginning to ripen when I left, about October 10. However, I saw some very fine little vineyards of Delaware and Agawam, in which there was no sign of mildew, black-rot, or any disease. The vines and fruit looked as clean and bright as if they had been washed every day. However, it is rather too far north for successful grape culture, except in very peculiar situations on southern and eastern slopes.

Prevention of Decay in Fruit.

In answer to the question of a subscriber, Mr. A. W. Cheever, of the *N. E. Farmer*, gives his ideas—and very sensible ones they are—upon how to improve the quality of our fruits:

The difficulties of fruit culture in this country appear to be increasing with the increased breadth of area devoted to orcharding. Injurious insects and parasitic fungi increase as their pasture increases. When the country was new, or rather when our fathers first planted fruit trees grown from seeds brought or sent over from the old country, the trees had the advantage of a new locality in which the insects and fungi had not yet arrived; but as fruit culture increases and trees were brought over from the old world, insects and parasitic fungi increase as their pasture increases. When the country was new, or rather when our fathers first planted fruit trees grown from seeds brought or sent over from the old country, the trees had the advantage of a new locality in which the insects and fungi had not yet arrived; but as fruit culture increases and trees were brought over from the old world, insects and parasitic fungi increase as their pasture increases. 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MICHIGAN FARMER,

— AND —

STATE JOURNAL OF AGRICULTURE.

GIBBONS BROTHERS

— SUCCESSORS TO —

WENSTONE & GIBBONS. Publishers.

No. 44 Larned Street, West

DETROIT, MICH.

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DETROIT, MONDAY, SEPTEMBER 5, 1887.

This Paper is Entered at the Detroit Post-
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In subscribing with agents for the FARM-
ER you should be particular to state to them
whether or not you wish the HOUSEHOLD
supplement. Complaints frequently come
in that parties do not receive it, and it in-
variably turns out to be the result of a mis-
understanding between the agent and sub-
scriber. The price of the FARMER alone is
\$1 25 per year, and of the FARMER and
HOUSEHOLD \$1 50 per year.

WHEAT.

The receipts of wheat in this market the
past week amounted to 299,778 bu., against
320,357 bu., the previous week and 423,408
bu. for corresponding week in 1886. Ship-
ments for the week were 282,750 bu. against
37,623 bu. the previous week and 230,421 bu.
the corresponding week in 1886. The stocks
of wheat now held in this city amount to
711,129 bu., against 771,582 bu. last week
and 1,660,303 bu. at the corresponding date
in 1886. The visible supply of this grain on
Aug. 27 was 30,572,750 bu. against 31,998,-
313 the previous week, and 41,385,092
for the corresponding week in 1886. This shows
a decrease from the amount reported
the previous week of 1,425,542 bu. The ex-
pect clearances for Europe for the week
ending 27 were 2,194,550 bushels,
against 2,942,352 the previous week, and
for the previous eight weeks they were
21,938,579 bu., against 14,760,942 bu. for
the corresponding eight weeks in 1886.

After a couple of days of depression early
in the week, values became stronger, and
advanced on both spot and futures. The
market continued strong up to the close on
Friday, but on Saturday the market ruled
weak all day, with prices, however, closing
at higher points than a week ago. Spot
wheat is in fair demand, and is stronger
than futures. No. 1 white is still scarce,
and maintains its position very steadily.
Sales during the week aggregated 1,341,000
bu. of spot and futures against 1,024,000 bu.
the previous week.

The following table exhibits the daily clos-
ing prices of spot wheat in this market from
Aug. 10 to Sept. 3d inclusive:

	No. 1 White.	No. 2 Red.	No. 3 Yellow.
Aug. 10	70 1/2	73 1/2	74 1/2
11	70 1/2	73 1/2	74 1/2
12	70 1/2	73 1/2	74 1/2
13	70 1/2	73 1/2	74 1/2
14	70 1/2	73 1/2	74 1/2
15	70 1/2	73 1/2	74 1/2
16	70 1/2	73 1/2	74 1/2
17	70 1/2	73 1/2	74 1/2
18	70 1/2	73 1/2	74 1/2
19	70 1/2	73 1/2	74 1/2
20	70 1/2	73 1/2	74 1/2
21	70 1/2	73 1/2	74 1/2
22	70 1/2	73 1/2	74 1/2
23	70 1/2	73 1/2	74 1/2
24	70 1/2	73 1/2	74 1/2
25	70 1/2	73 1/2	74 1/2
26	70 1/2	73 1/2	74 1/2
27	70 1/2	73 1/2	74 1/2
28	70 1/2	73 1/2	74 1/2
29	70 1/2	73 1/2	74 1/2
30	70 1/2	73 1/2	74 1/2
31	70 1/2	73 1/2	74 1/2
Sept. 1	70 1/2	73 1/2	74 1/2
2	70 1/2	73 1/2	74 1/2
3	70 1/2	73 1/2	74 1/2

No. 2 red the closing prices on the
various deals each day of the past week were

as follows:

	Sep. 10	Oct. 1	Nov. 1
Monday	73 1/2	75 1/2	77 1/2
Tuesday	73 1/2	75 1/2	77 1/2
Wednesday	73 1/2	75 1/2	77 1/2
Thursday	73 1/2	75 1/2	77 1/2
Friday	73 1/2	75 1/2	77 1/2
Saturday	73 1/2	75 1/2	77 1/2
Sunday	73 1/2	75 1/2	77 1/2

Spelt will have to import more wheat
now owing to a light crop.

The crop in South Russia is reported to
be fairish yield and of good quality.

Austria, Hungary and Switzerland have
good wheat crops this season.

The English agricultural department has
made an estimate of the wheat crop in
Great Britain. It says the area under
wheat this year shows a smaller increase
than had been expected—only 31,457 acres,
or 2 1/2 per cent compared with 1886; while it
shows a decrease of 169,956 acres, or 6 1/2 per
cent, compared with 1885. Adding about
70,000 acres for Ireland, the total wheat
of the United Kingdom in 1887 is about
2,387,000 acres. The latest reports re-
ceived relative to the yield are less favor-
able, the variability in quality and weight
becoming more pronounced as threshing
progresses, the effect of the long
drought and premature ripening of the
grain, counteracting to a considerable
extent the extraordinary yields ob-
tained in some favored sections of the
country. The average yield is variously
estimated at from 30 to 32 bushels per acre,
the general opinion apparently being that
it will be close to 32 bushels, which, if
reached, will give a crop of approximately
76,368,000 bushels, of which, after deducting
about 70,000,000 bushels, will be imported during
the crop year just commenced. It is prob-
able that the consumption of wheat will be
rather larger this year than last, as wheat is
cheap and a good deal is likely to be used
for live stock, feed stuff being deficient,

and potatoes small and below an average
crop.

Shipments of wheat from India for the
week ending Aug. 27, 1887, as per special
table to the New York Produce Exchange,
aggregated 260,000 bu., of which 140,000
bu. were for the United Kingdom and 120,
000 bu. to the Continent. The shipments for
the previous week, as cabled, amounted to
500,000 bush., of which 240,000 went to
the United Kingdom and 320,000 bu. to
the Continent. The total shipments from
April 1, 1887, beginning of the crop year,
have been 20,460,000, including 10,310,000
bu. to the United Kingdom and 10,200,000 to
the Continent. The wheat on passage from
India Aug. 16 was estimated at 5,193,000 bu.
One year ago the quantity was 6,472,000 bu.

Recent exports of wheat from India have
been comparatively small, owing to several
causes—deficiency in the last crop, exhaustion
of old stocks, high local prices, and
perhaps a fear that the rains will be inade-
quate for a good yield at the next harvest,
in which event there would be another
famine.

The following table shows the quantity
of wheat "in sight" at the dates named,
in the United States, Canada, and on passage
to Great Britain and the Continent of Europe:

Bushels.
Visible supply 31,998,593
On passage for United Kingdom 4,04,000

Total previous week 51,066,593
Total two weeks ago 52 555,097
Total Aug. 21, 1886 60,756,852

The estimated receipts of foreign and
home-grown wheat in the English markets
during the week ending Aug. 27 were 640,400 bu.
more than the estimated production
for the eight weeks ending Aug. 13; the receipts are estimated to
have been 2,524,048 bu. less than the con-
sumption.

The Liverpool market on Saturday was
quiet with light demand. Quotations on
American wheat were 6s. 7d./bu. 9s. per
cental for California; 6s. 2d./bu. 9s. 4d. for
No. 2 winter, and 6s. 1d./bu. 2d. for No.
2 spring.

CORN AND OATS.

CORN.

The receipts of corn in this market the
past week were 19,116 bu., against 5,808
bu. the previous week, and 21,391 bu. for the
corresponding week in 1886. Shipments for
the week were 4,595 bu., against 497 bu.
the previous week, and 9,194 bu. for the
corresponding week in 1886. The visible supply
shows an increase during the week indicated
of 269,762 bu. The stocks held in this
city amount to 12,081 bu., against 65,190 bu.
last week, and 17,329 bu. at the corresponding
date in 1886. The export clearances for
Europe during the week were 597,931 bu.,
against 151,888 bu. for the previous week;
and for the previous eight weeks they were
2,863,957 bushels against 4,751,574 bushels
for the corresponding week in 1886. Spot corn is in fair demand and firm, and the tone
shows some loss of strength.

Quotations in that market on Saturday were as follows:

EASTERN STOCK.
Western, pails, fancy 24 2/5
Western, State, tubs, fancy 24 2/5
Western, State, tubs, common 24 2/5
Creamery, good 19 2/5
Creamery, fair 16 2/5
State dairy tubs, fancy 21 2/5
State dairy tubs, common 16 2/5
State dairy tubs, ordinary 16 2/5
State dairy tubs, good 16 2/5
State dairy tubs, fair 16 2/5
Western stock, good 24 2/5
Western stock, fair 24 2/5

The exports of butter from Atlantic
ports for the week ending Aug. 27 were
615,977 lbs., against 1,155,414 lbs. the previous
week, and 1,112,588 lbs. two weeks previous.
The exports for the corresponding week in 1886
were 437,963 lbs.

CHEESE.

Our local market maintains a steady tone
at a range of values about the same as a
week ago. Sale have been on a basis of 12
1/2¢ per lb. for full cream Michigan, 10 1/2¢
per lb. for No. 2, and 12 1/2¢ per lb. for
No. 3. New York was dull and rather weak on Saturday. Toledo was dull
but steady at 42 1/2¢ per lb., and for September
delivered at 44 1/2¢. No. 2 yellow is quoted
at 45 1/2¢, and No. 3 do at 44 1/2¢. This market
closed strong up to the close on Friday, but
on Saturday the market ruled weak all day,
with prices, however, closing at higher points
than a week ago. Spot wheat is in fair demand,
and is stronger than futures. No. 1 white is still scarce,
and maintains its position very steadily.
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bu. of spot and futures against 1,024,000 bu.
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29	70 1/2	73 1/2	74 1/2
30	70 1/2	73 1/2	74 1/2
Sept. 1	70 1/2	73 1/2	74 1/2
2</			



PERCHERON HORSES

FRENCH COACH HORSES!

Our latest importation has arrived and we will be glad to see our friends and acquaintances and those with whom we have been in correspondence at Island Home to look them over. We have an exceptionally fine lot. All our imported stock is selected by Mr. Farnum himself personally in France and he accepts nothing but the best horses of the most approved breeding. Our home-bred stock is the progeny of selected sires and dams of the best form and most desirable breeding. We guarantee our Stock, sell on easy terms and at a low price. Of course we have not yet issued our Fall Catalogue and the present one (which will be mailed Free to all applicants) only contains a small amount of our stock. We offer a very large number to select from. We will be glad to answer all correspondence promptly, but we would advise persons contemplating the purchase of a horse to get on the train and come and see us; we are not far away, and our stud is so large that all may be pleased. Savage & Farnum, Proprietors of Island Home Stock Farm, Importers and Breeders, Grosse Isle, Wayne County, Mich.

Address All Communications to Savage & Farnum, Detroit

steel bar mentioned above, and bent the piece of a crescent or semicircle not over 2½ inches across to scoop the earth out, which completes the list of tools needed. Dig under the center of the stump, and against the stump if not rotten, but if rotten get down deeper (if you strike a hard root, down along and partly around it). Place the dynamite tight against the root and tamp it solid. The stump will come out clean every time if you use enough dynamite. Two men thus accustomed, who understand the business, will blow out from 70 to 80 dry stumps a day, if they are not too big. It will cost for green white oak stumps, from 18 inches to three feet, about \$1; others about 30 to 65 cents, according to size, and time since they were cut.

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AU22-6t

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150-head rams and ewes, imported and American-bred from the best breeding stocks of Flock No. 1, owned by J. E. Bradbury, R. Jones, T. Dicken, Jos. Puley, M. P. Henry, Lovatt Minton Everall, Bird, and others. First quality rams and ewes in Michigan and first on record. Stock for sale.

WESLEY J. GARLOCK, Howell, Mich.

HOLSTEINS FOR SALE.

The undersigned has for sale eight head of pure-bred Holstein-Friesians, of different ages, from calves up to six years. I will sell them at very reasonable prices. Address

A. GORSLINE,
Ypsilanti, Mich.

SEED WHEAT.

Australian White. The ideal white wheat.

First crop last fall at Chicago, Jacksonville, St. Louis, and other points.

Reported in Bulletin No. 14 from the Michigan Agricultural College. (See Board of Agriculture report for 1886.)

For further information address the above at Lexington, Ky., or R. E. EDMONDSON.

N. B.—W. W. BOSTILL, Lexington, Ky., will represent R. H. Prewitt.

29-4t

Pure Seed Wheat

Pure Velvet Chaff. Seed from Indiana Agricultural College. Price, in quantities less than four bushels, \$1.50; over, \$1.25. Also Hybrid Mediterranean and Nigger seed wheat, 25 cents per bushel, and four bushels for \$1.00 over. \$1.00 when ordered; backs free. Delivered at Tipton Station, Mich.

A. C. GLIDDEN, Paw Paw, Mich.

SEED WHEAT.

Champion Amber, Rodgers' Amber, Martin's Amber, Cleopatra, Arcadia, Red Amber, and Zimmerman. Only a limited amount of the last four named varieties. All grown on the college farm this season. Thoroughly cleaned, graded, and shipped at \$1 per bushel. 200 each. Address—

SAMUEL JOHNSON,
Agricultural College, Mich.

29-4t

HYBRID MEDITERRANEAN SEED WHEAT

Order at Once!

\$1 per bushel; new bags 20 cents. Yielded 25 to 30 bushels per acre where other varieties yielded only 10 to 15 bushels per acre. Send postal for seed of wheat circular.

T. I. SUTTON,
Sutton, Lenawee Co., Mich.

21-4t

SEED WHEAT

New and Old Varieties.

C. B. PITTMAN & CO., PONTIAC, MICH.

Diehl Mediterranean

SEED WHEAT.

A few choice varieties. It has stood the winter and insects better than any variety in general cultivation this season. Price \$1.25 per bushel. Eight bushels or more, \$1. sacks 20¢. Seed thoroughly cleaned.

A. L. RICHARDSON,
Box 4, Parma, Mich.

21-4t

For Sale—Farms and Farming Lands

In the Saginaw Valley—the best farming lands in Michigan. Address

H. P. SMITH, East Saginaw.

21-4t

Blasting Stumps.

A correspondent of the Ohio Farmer says: "A two-inch auger will do for small stumps, and in the spring, but when the wood gets hard, and for large stumps, the use is of no use. A piece of steel two inches broad, 10 inches long, and half an inch thick, with a three-fourths inch iron chisel, and sharpened like a chisel, is one make a scoop of an old mill saw, cut twelve inches long, welded to the

iron bar, which promises to rival even Victoria's in magnificence."

Members of the Russian mission sent to Siberia, insulted and beaten Indian women severely that a riot was provoked and the Russians killed by the indignant hus-

bands. Emperor William is reported better, but his care and feebleness render him a constant anxiety to his subjects. Last week he exhibited an unfeeling indifference to some of the scenes of the massacre, and felt no desire to hide it. The opinion prev-

ails that his real feebleness is carefully con-

sidered for fear of diplomatic complications.

Home-Made Cheese.

Every day passes but we are asked some simple directions by which farmers can make their own cheese at home, without investing any money in utensils; the following article from the Farm and Garden Magazine answers all these and we therefore print it here.

There are thousands of farmers who throw away a good deal of milk, and yet buy cheese or go entirely without it. Now since one pound of cheese contains as much nutriment as two pounds of beef, free from bone, and costs less than one pound, it is great economy for a farmer to make cheese, if not for his own domestic use; but cheese makes like other good old fashions for comfort, is fast becoming one of the arts.

It is easy to make cheese, as the process is very simple one, and the requisites few and easily obtained. One must have milk enough of it, for every pound of cheese takes ten pounds of milk, and a ten-pound cheese is about as small a one as one may well make. A clean, sweet tub will hold the milk, a boiler large enough to contain ten gallons, and a small scale which any young man can make, will serve to hang a stone upon, are all the requisites needed.

Making cheese is a chemical operation, needs a thermometer to keep the milk at the right temperature. First bring your milk to a temperature of 90 degrees, this make a soft cheese; higher temperature makes a harder one. The milk may be milked in the cellar and stirred late at night and early in the morning; to keep the cream from separating. If next morning, find that any cream has risen on the milk skin stir it off and warm the milk temperature of 100 degrees. Add it to the creaming milk, which will be about 80 degrees when fresh from the cow; the whole thus mixed will be about the right texture, which is 80 degrees.

To add the rennet, this is the liquid only steeping over night a piece of the stomach of a sucking calf, one inch deep two inches long, in a quart of warm water with a tablespoonful of salt added. This is for one hundred pounds of milk. In the morning, strain the liquid into warm milk in the tub, stir it well and cover the curd with the cloth to keep the curd warm until the curd is formed, which is in about half an hour.

When the curd is formed enough to take a long-bladed knife and draw it out both ways so as to cut the mass about one inch squares. This causes them to separate; when this separation is effected, dip or draw out the whey farther into a mass on one side of the cloth till it is in such a manner as to cause it to drain off. Keep the tub covered with the heat. If the curd has cooled considerably, heat the whey that has been left up to 103 degrees, and return it to the curd until it is warmed through when draw off the whey, leaving the curd for about an hour until it turns a little when break it up fine with the hand salt it with about half an ounce of salt per pound of curd, and put it in the hoop. The proper-sized hoop for a ten-pound cheese is about eight inches in diameter by inches deep, which has neither top nor bottom. Place it on a smooth board or bench, and press the curd down in it with the hands. When it is all in, put a loose cover and pull all under the press and let it rest on a block resting on the cover till the cheese is solid enough to keep its shape, requires very little pressing. Twenty-four hours is long enough in the press, having turned your cheese twice in that time. At this interval, take out your cheese and the outside with butter and wrap it in a cloth over both for about an inch, place cheese in a room or cellar, and turn it every day for weeks, after a while turn it every day for four weeks, and it is then ready for use."

The New Theory for Cheat. Writer in the Des Moines, Iowa, Register explains the so-called turning of wheat ears by saying that the center or main stalk bears the male flower has been caused by frost or other means, and hence not fertilize the flowers on the sucker ears. The cheat according to his theory consists of unfertilized heads, growing on weaker or side shoots, and the reason is no cheat in spring wheat is the head is not formed in the stalk until after all danger of frost has passed. He mentions following fact in proof of the truth of his theory: "I saw a very fine stand of winter wheat in 1886, in Western Ohio, covered into a field of cheat in one night. The town cows breaking it into a field and grazing it down, all in one night. When it grew again it was all cheat—no wheat in sight, though the stand and stalks were as tall as the class." The American Miller says of explanation: "It may be the correct one; now, it has the merit of compromising existing statements and reconciling them with experience. The writer refers to further says that cheat never germinates. If this be true it gives strong support to his theory." All the same, the theory above can very readily confess himself of the fallacy of his theory by some cheat or chaff, and seeing how it can be grown from the seed, it has been done frequently in this State.

Blasting Stumps. A correspondent of the Ohio Farmer says: "A two-inch auger will do for small stumps, and in the spring, but when the wood gets hard, and for large stumps, the use is of no use. A piece of steel two inches broad, 10 inches long, and half an inch thick, with a three-fourths inch iron chisel, and sharpened like a chisel, is one make a scoop of an old mill saw, cut twelve inches long, welded to the

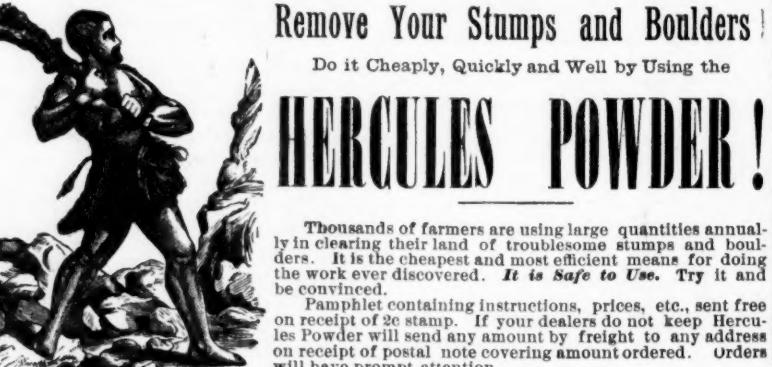
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Remove Your Stumps and Boulders

Do it Cheaply, Quickly and Well by Using the

HERCULES POWDER!

Thousands of farmers are using large quantities annually in clearing their land of tree stumps and boulders. It is the cheapest and most efficient means for doing the work ever discovered. *It is Safe to Use.* Try it before you are convinced.

Herbaceous containing instructions, prices, etc., sent free on receipt of 2¢ stamp. If your dealers do not keep Hercules Powder will send any amount by freight to any address on receipt of postal note covering amount ordered. Orders will have prompt attention.

L. S. HILL & CO.,
19 and 21 Pearl Street, GRAND RAPIDS, MICH.

Wholesale & Retail Dealers in High Explosives, Guns, Fishing-Tackle, Sporting Goods.

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IMPORTERS AND BREEDERS OF

HEREFORD CATTLE!

The Michigan Herd of Prize Winners.

At the head stands Clarence Grove (9709), an imported son of the great Bull by Mrs. W. C. Weller, a son of the great Lord Wilfred. Such cows as Lovey 3d, Fairy Land, Grand Duchess, Lady of the Lake, Queen of Shropshire, Fairy Princess, Barcelona Queen by Horatio Shropshire, three grand daughters by Freston (9811), and others of equal merit, compose the breeding herd.

JAMES D. BOTSFORD, Oscoda, Centre Co., breeder of Shorthorn cattle and American Merino sheep. Correspondence solicited.

HENRY BROWN, Brooks Farm, Flint, breeder of Shorthorn cattle and American Merino sheep. Correspondence solicited.

CHARLES BISHOP, Lakewood, Toledo, breeder of Shorthorn cattle and American Merino sheep. Correspondence solicited.

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Poetry.

NOT GLAD, NOR SAD.

You sang a little song to-day,
It was not sad, it was not gay;
The very theme was high or low'n;
Two lovers met, as lovers may.
They had not met—since yesterday—
They must not meet again—till morn!

And did they meet again, my dear?
Did morning come and find them here,
To see each other's eyes again?
Alas, on that you are not clear,
For hearts will shift as winds will veer,
And love can veer like any vane!

Ah no, I think some sudden crave,
Some bitter spite befell their days—
What was that plaintive minor for?
No more together lie their ways,
Remote, perhaps the lower strays,
Perhaps the lady comes no more!

So strange the numbers sob and swell;
No, there's no guessing what befel;
It is the sweetest song you sing!
Not sad, and yet—I cannot tell—
Not glad, and yet—it's very well—
Like love, like life, like anything!

—Macmillan's.

GOOD NIGHT.

God keep you safe, my little love,
All through the night, the Rest close in His encircling arms
Until the light.
My heart is with you as I kneel to pray:
Good night. God keep you in his love alway.
Thick shadows creep like silent ghosts
A-and my head,
I lose myself in tender dreams,
While overhead
The moon comes creeping thro' the window bars
A silver sickle gleaming mid the stars.
For I, though I am far away,
Feel safe and strong
To trust you thus, dear love—as yet
The night is long,
say with throbble breath the old fond prayer,
Good night. Sweet dreams! God keep you everywhere.
—Edwin C. Lyon.

Miscellaneous.

Mrs. Livingstone's Grave.

In Sir Harry Drummond's thrilling narrative of his explorations in tropical Africa, read before the Chautauqua summer school, he gives the following touching description of the grave of the heroic wife of the great explorer Dr. Livingstone:

We struck across a low neck of land, and after an hour's walk found ourselves suddenly on the Zambesi. A solitary hut was in sight, and opposite it the boat which had come to take us up the Shire. There is more in the association, perhaps, than in the landscape, to strike one, as he first furrows the waters of this virgin river. We are fifty miles from its mouth, the mile wide water shallow and brown, the low, sandy banks fringed with alligators and wild birds. The great delta plain, yellow with sun-tanned reeds and sparsely covered with trees, stretches on every side; the sun is blistering hot; the sky, as it will be for months, a monotonous dome of blue—not a frank, bright blue like the Canadian sky, but a veiled blue, a suspicious and malarious blue partly due to the perpetual heat-haze, and partly to the imagination, for the Zambesi is no friend to the European, and the whole region is heavy with depressing memories.

This impression, perhaps, was heightened by the fact that we were to spend the night within a few yards of the place where Mrs. Livingstone died. Late in the afternoon we reached the spot—a low, ruined hut with a broad veranda shading its crumbling walls. A grass-grown path struggled to the doorway, and the fresh print of a hippopotamus told now neglected the spot is now. Pushing the door open, we found our selves in a long, dark room. Its mud floor broken into fragments, and remains of native fires betraying its latest occupants. Turning to the right we entered a smaller chamber, the walls bare and stained, with two glassless windows facing the river. The evening sun, setting over the far-off Morumbala Mountains, filled the room with its soft glow and took our thoughts back to that Sunday evening, twenty years ago, when in this same bedroom, at this same time, Livingstone knelt beside his dying wife and witnessed the great sunset of his life.

Under a huge baobab tree—a miracle of vegetable vitality and luxuriance—stands Mrs. Livingstone's grave. The picture in Livingstone's book represents the place as well kept and surrounded with neatly planted trees. But now it is an utter wilderness, matted with jungle-grass and trodden by the wild beasts of the forest, and as I looked at the forsaken mound and contrasted it with her husband's marble tomb in Westminster Abbey, I thought perhaps the woman's love, which brought her to a spot like this, might not be less worthy of immortality.

Boys and Girls of Pioneer Days.

The Hon. L. D. Nelson in his address on the occasion of the thirty-first annual reunion of the old settlers of Carroll County, Indiana, says: "No great amount of foolish etiquette that makes so many people miserable in these days was indulged in or recognized. The people did not make themselves unhappy because of a little grammatical blunder or miss-spelled word. The boys always expected the girls to be ready to go on short notice. No two or four hours, with the aid of a maid, were indulged in to get ready for a party. On the other hand, the boys fed the pigs and did the chores after the day's work was over; and the girls quit the spinning-wheel, milked the cows, and washed the dishes. Thus in joyful glee all parties were soon ready and off to an 'apple-slash,' a quilting, or a wedding. No question was asked next morning at the breakfast by those who staid at home how such and such a one was dressed—nor was it told that this or that one 'looked frightful.' There were no back-bitings and jealousies, but all would exclaim that they had a glorious good time. There were many weddings in those days, and but few divorces. There were no broken banks or embezzlements, and no public or private defalcations. Robberies and suicides very rarely occurred, and there was no poverty amounting to degradation, nor squalor, vice, and shame such as stalk abroad at the present day. Tramps were unheard of, and strikes and boycotts were things unknown."

Adventures of Tad:
—OR THE—
HAPS AND MISHAPS OF A LOST SACHET.

A Story for Young and Old.

BY FRANCIS H. CONVERSE
AUTHOR OF "PEPPER ADAMS," "BLOWN OUT
TO SEA," "PAUL GRAFTON," ETC.

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Published by Special Arrangement.]

Tady timidly thought it might be the sailor's false imprisonment; she remembered to have heard that such things were done sometimes, while Tad shook his head in silent bewilderment.

"Well, sir," exclaimed Captain Flagg, pointing his topic, so to speak, by touching the end of one stumpy forefinger with the tip of the other, and speaking with intense thought quiet enjoyment, "he put it like this." James W. Dunn, my client," he says, "claims pay at the rate of five pound a day for the use of his wheel, during eighteen-months voyage. It's his wheel, isn't it? he had to pay for it, and there's the name on the rim. The ship's had the use of it all this while, and a ship can't get along without a wheel no better without a compass," says the lawyer, "and you can settle it right now, or else we'll take it up to the adm'ralty court."

"Wasn't he smart! and did the owners have to pay it?" exclaimed and questioned Polly in the same breath.

Captain Flagg nodded an affirmative.

"And so the sailor got a big lot of money?" put in Tad, as an interrogative.

"He got what the lawyer left, most likely," returned Captain Flagg, rather dryly—which slight reflection against the legal professions was, fortunately, not understood by his hearers.

The sun disappeared behind the ocean rim, and after supper the side-lights were put out, and Tad instructed as to the duties of a lookout; for now the "Mary J." was headed right out to ward the open sea, which looked terribly dark and cold to Tad's astonished eyes, particularly as there was no such thing as a sign of land anywhere to be seen, excepting the low sandy cape shores astern, which were fast disappearing in the distance and increasing darkness.

Before sending the youthful mariner for aid, Captain Flagg called him below, and gravely commanded him to put on some well-worn under-flannels, several sizes too large, which, however, Tad found very comfortable, a pajama, within whose capacious folds three or four boys of Tad's dimensions could have been buttoned, and a large fur cap, which, only for resting on the rims of his ears, would have completely extinguished him.

"You don't look so stylish as you might," Captain Flagg acknowledged, after Tad had effected the required change, "but sailors go in for comfort, Mr. Oscar Wilde, with which assurance Tad—conscious that he looked rather funny, to say the least—was fain to be comforted. Indeed, the most that troubled him was the fear that Miss Polly might possibly laugh when he ventured on deck. But, though Polly had been brought up in the country, she had too much natural politeness to show such courage, while he, a lubberly boy, couldn't even offer to do the least thing to keep the vessel from going straight to the bottom of the sea! But I, myself, don't think there was any thing very strange in the matter. It was Tad's first experience, and seasickness, like conscience, makes cowards of us all. The Atlantic Ocean is a terrible fellow to take the courage out of a landsman, when it gets on a sort of rampage; and I don't wonder that aesthetic Mr. Oscar Wilde, with his fastidious tastes, should shudderingly declare that he was disappointed with it. But I believe that, in spite of this severe criticism, the Atlanta goes right on roaring and dashing, and swallowing up ships, and making people sea-sick, just as it has been doing for ever so long."

Tad couldn't be persuaded to go below. He thought that when the vessel did come to go down, he would perhaps stand a better chance on deck—though, it is true, he couldn't swim a stroke. And as he lay there all night long till sunrise, his sickness began to abate a little, as did also the stiff westerly breeze which, coming further from the south, gave the "Mary J." a perfectly fair wind for her home-bound passage.

They were all so kind, when, quite dizzy and weak, Tad managed to stagger to his feet, like a fly thawed out by the warm rays of the morning sun, which dried up the wet deck, and made

the waves of the great blue sea all about them sparkle with gladness.

George Washington got him some hot coffee, and said he was glad to see him "condolecent." Captain Flagg, who looked quite fresh and hearty in spite of having been up all night, smiled broadly, telling Tad that he'd got over the worst of it, and would begin to get his sea-legs on in a jiffy. Eph grinned at him over the top of the wheel, and proffered the use of his jack-knife, if he (Tad) wanted to whittle. Polly glanced at him demurely, and Bounce lapped the ends of Tad's extended fingers. On the whole, Tad didn't feel nearly as badly regarding his humiliation as he had expected to; but all his bright visions of the pleasures of seafaring life had been swallowed up in the darkness and terror of the night before. He was not intended by nature for a sailor, and now Tad's greatest desire was to set his foot on dry land again. I know that, in contrast with the average boy of juvenile fiction, this sounds tremendously unheroic, but I can't help it; there are "born sailors" and born landsmen, and Tad was one of the latter. One must take people and things as he finds them in real life. Yet, as Tad began to feel better, there was much to wonder at and admire all about him. Far away on the port hand was the distant coastline, dotted here and there by the white shaft of a light-house. To starboard, the ocean rolled on and on, till its waters washed the very rim of the great arching dome of blue which came down to meet it. On every side were the sails of passing vessels, and beautiful beyond compare was the sight of a handsome ship, with all drawing sail set, standing in for Boston Light, heading almost directly for the schooner. On she came, with her yards braced sharp against the back-stays, throwing the sparkling foam from the cutwater in great swaths, that swept along her glassy sides and formed a creamy track astern. As the stranger was passing so near, Captain Flagg hailed her through an immense tin speaking trumpet.

"What ship's that, and wherefrom?" "Ship 'Socoolo,' a hundred and thirty days from Calcutta—what vessel's that?" bellowed back the Captain, who was standing by the weather mizzen rigging, with his hand on a backstay.

"Schooner 'Mary J.' of Bixport;

twenty-four hours out o'er Boston," bawled Captain Flagg, with a gracious wave of the hand; and Tad, who had listened to these nautical queries and replies with great marveling, wondered what made the Captain of the ship double himself up, like a man with a sudden attack of colic, or like a person in an agony of laughter, as the great vessel went plunging onward toward her destination.

"Them that goes down to the sea in ships has cur's exper'ences, Thaddeus," said Captain Flagg, laying down his big trumpet with an impressive nod of the head.

With a vivid recollection of his own

experience of the previous night, Tad replied emphatically that he had no doubt of it.



ATTACK OF SEASICKNESS.

"When you come to be a sailor, Thaddeus, and, may be, a ship-master, like myself," pursued the Captain, feeling mechanically in his pockets for his pipe—which he discovered, a moment later, to be on the deck, in possession of Bounce, who was gravely dragging it away to the immeasurable delight of Polly—"an' you've gone through the r'sponsibilities, an' dangers, an' typhoons—an' things gen'ly," he rather hollered concluded, as he recovered his pipe from Bounce, "I realize that what Solomon says about truth being stronger's fiction is just about as he's put it."

"But I—I don't think I want to be a sailor," faltered Tad, with downcast eyes.

"What—not want to be a sayer bold, and plow the ragin' main," exclaimed the Captain with a look of uttermost amazement.

"No, sir," faintly replied Tad. And as he thus spoke, he hung his head so far one side that the big fur cap fell off, and was immediately seized by Bounce, who began to worry it, evidently regarding it as some new species of the feline race, until the sailor was hoisted up again, they were not nearly as large as before.

And then waxing bold, the gallant old sea-dog, Captain Jethro Flagg, decided that, instead of lying to till morning, he would—to use his own nautical expression—"keep her a-joggin' to the nor'ard and east'ard."

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"Schooner 'Mary

led out of the
on his bener.
Flagg, having
the dinner
ing for the rest

oly were wan-
s, followed by
a city-reared
very thing as
strange as did
country was as
an expressive
ver the garden
the wide quiet
stage-coach,
was rumbling
shouts with joy to his moans,
when he has exhortized all that he will
still take out one of his bones,
waving the calcined remains of him,
"I guess dance will do;
about the jocular repartee:
it hot enough now for you?" —James Watson.

The Rubber Tree.

The chief industry in Eastern Costa Rica

is the collection of caoutchouc (pronounced

with the accent strong on the first

syllable) as the native Indians call that

rubber to us known as India rubber.

Many years ago more than 100,000

tons of it were shipped every month from

Town alone, but at present the aver-

age export per month is only about 62,000

tons. This considerable falling off is

due to the fact that no legal or other sur-

veillance is exercised over gathering the

caoutchouc, and the customary improver-

ment of these people many of the valuable

uses which yield it have been ruined.

Palms, or ruberumbers, are the most

gentle and irresponsible creatures, whose

object when out on a hunt is to secure

the prospects of other yularoes,

game of the future.

Polly thronged the street to what

the "meek" little old church, or

church of souls, where a row of souls

as the village

which, to Tad,

almost silently le-

the entrance

ombstone was

rick elevation;

in almost

words:

story of

LES.

ians.

1734."

and stone as

Tad to a

part of them stood

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aid Polly, in

intended to the

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only broken

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voice:

passengers

south

gale of Febra-

y.

and torn

the sand

pe

seas,

with death!

embrace

in breath!"

—

Bill Arp's Portiere.

I had rather work on a hot day than play

cards or base ball or read a sensational

novel. It is fortunate for me that I love

work, for I'll always have plenty of it to do

as long as Mrs. Arp lives, and her children

are nearly as bad. Right now they are

waiting for me to make some octagon steps

to put their flowers on, and if there is any

more troublesome job I don't know it.

It takes mathematics and science and lots

of work to make these hexagons and octago-

nons. They saw one somewhere, and so I've

got to fix it. I ordered a single door from

the parlor to the new dining-room; while I

was gone they jiggled with the carpenter

and made him put large double doors with

some whimsies all around and a fine

mordred lock with gilded knobs, and of

course I surrendered. The carpenter found

out the very first day who was running the

domestic machinery, and he acted accordingly.

Not long after they had learned to make caoutchouc

in blocks, and also used it for waxing their

canes, as the clothing of the modern yularo

soated. That, no doubt, was the origin

of the idea of its manufacture into water-

and cloth, which first gave it a commercial

value. Until 1820 did its employ-

ment extend much beyond the erac-

ing of pencil-marks, though the quantity de-

creased.

"Who's going to do all these things for

us, ultimately?" asked Mrs. S., her eyes

opened wider and wider.

"The Anti-Poverty Society, of course.

See here's my certificate of membership.

Received of Josephus Stiggins five dollars

for a life membership in the Prevention of

Cruelty to Poverty."

"Cruelty to Poverty?"

"No, you see I am a little excited,

but no wonder. I've been poor all my life,

and now I'm to be opulent-rich. See-

life membership in the Society to abolish

Poverty. Signed, Henry George."

"But who is Henry George?"

"Great heavens! woman, are you so ig-

norant as to ask that? Have you never

heard of Henry McGlynn and Dr. George

I mean George Glynn and Dr. McHen—d'n

it, I'm all mixed up to-night, but you can

read about them in the morning paper."

"You paid \$5 to join their society?"

asked Mrs. S., mournfully: "all your week's

wages?"

"Hem—well, yes," stammered Stiggins,

but \$5 is cheap enough to have a man's

poverty abolished, ain't it?" Confound it,

he said. "I've been unable to find it. An

old dilapidated kitchen that we don't use is

in sight of that window, and that is all the

vista I see. Women have an eye for the

beautiful, and I reverence their taste, but

sometimes it takes me a week to discover

the esthetic and fall into raptures over it.

Bill Nye on the Indian Question.

Sig. Colorow is of Indian parentage and

his lineage, such as it is, is very long.

His ancestors run back as far as the earliest dawn

of the Christian era. They claimed the

land extending in a southerly direction from

the North Pole, and seemed to ignore the

door. When his mother remonstrated with

the youth he met her reproach by the bold as-

sertion:

"You didn't see me do it."

"No," she replied solemnly, "but God did."

"Well," the urchin retorted, with an air of

contemptuous superiority, "I guess God isn't going around giving away all He sees in

this house."

"But my dear," urged Mrs. Stiggins,

timidly, "if you have paid in all that money

to the society how are we to buy provisions

for next week? Who is to provide?"

"Provide?" interrupted Stiggins, wrath-

fully, "doesn't the constitution of our so-

cieties provide that there shall be no more

than poverty, which has so long

stalked through the land, shall quit stalk-

ing the land, shall quit stalk-</

(Continued from First Page.)

to be true, would have justified the Board in removing Prof. Johnson as one unfit for the position he was occupying.

It will thus be seen that charges of so serious a character, involving the reputation and standing of a professor, should not be made by any fair-minded, honorable student, without personal knowledge of such facts as would at least tend to sustain the charge made. Yet when the students were called, one by one, a sked upon honor to state to the Board what they knew concerning the charges, *sæpius*, and examined, they and their leaders had to, and did, admit, that they could not prove what they had alleged and signed as true, and that as to the great body of the charges they, individually, had no personal knowledge whatever—thus establishing this fact:

Second, that these young men made charges against Prof. Johnson for the avowed purpose of injuring and destroying his reputation as a teacher, and to have him removed from the chair which he was then filling to the entire satisfaction of the Board, not knowing whether such charges were true or false. And when during the investigation they ascertained that the charges made could not be proven, they did not possess the manhood to acknowledge the great wrong they had been guilty of. Students who will thus make baseless assertions against the reputation of a professor, should be at least censured, and taught that to thus give currency to such a charge, not knowing whether it is true or not, is about as serious as to make a willfully false statement concerning another.

THE LATEST DIFFICULTY.

The difficulty this year arises out of the fact, I believe, that two of the students did not pass a satisfactory examination, and Prof. Johnson therefore declined to give them the necessary certificate. If these students did not pass a satisfactory examination, then Prof. Johnson was but acting in the performance of a clear duty in the course adopted. If they deemed themselves unfairly treated they should have presented the facts to the President and requested another examination. Instead of taking this course, a large number of the students take the matter into their own hands, and an insulting and disgraceful exhibition, now well known, followed. Are students thus to attempt to redress their supposed grievances—to coerce teachers into permitting the slothful, the indolent or the dunces of the class to pass or graduate? I had supposed otherwise. But what does the instance of last year and of this year establish? This: that when one or more students consider themselves aggrieved by the action of a professor, they call upon the others to join them in making false charges and the adoption of other unmanly ways, for the purpose of driving the obnoxious professor away, and the students thus called upon respond. Thus the student, who has no grievance, signs his name to a charge not knowing whether it is true or false, or joins in a disgraceful proceeding, simply to please the others. Who do the good people of this State do send their sons to the Agricultural College expect such principles to be instilled into them?

THE REMEDY.

Good manners, strict integrity and honor, should be taught in all our schools and colleges, and I do not know of any institution in this State where the necessity for such culture is so apparent as the Agricultural College. It is not for the State Board, but for the President and professors to attend to these branches. The course of the students during the past two years shows that this part of their education is being sadly neglected. The President could stop all this nonsense if he but possessed the nerve—the backbone—to make the effort. He, however, is possessed of the erroneous idea that the best evidence of a prosperous and successful college is the large number of students within its walls. It is numbers and not moral standing that is after, and apparently he is unwilling to risk his standard of success by adopting one of excellence of product in lieu of quantity. He would rather sympathize with the boys and keep them, than risk losing them in the process of refining.

There is another difficulty. No sensible man doubts for a moment but that the faculty could put a speedy stop to such conduct so unbecoming to students; this however is not done, and it is currently reported as a well known reason that some members of the faculty would be pleased to see Prof. Johnson supplanted. A little sympathy shown by one or more of the faculty would be a wonderful encouragement to the boys in their boycotting methods. The sooner the Board insists upon the faculty performing its duty in putting down the rowdy element, and in thus sustaining each and every professor placed in the College by the Board, the better it will be for the College.

ISAAC MARSTON.

DETROIT, Aug. 31, 1887.

Strawberry Plantations.

Parker Earle, of Illinois, who has had extensive experience, sends to the secretary of the Michigan Horticultural Society, his mode of managing strawberries, which is briefly as follows: Plant in spring, cultivate clean all summer, in matted rows, keeping the rows distinct. Mulch late in autumn with wheat straw, covering the rows lightly and the spaces heavily, and never take it off. He said: "Pick every day, seven days in the week—that it is wicked to work so hard," but distant shipment he thought required it. Quart boxes five inches square and two and a half inches deep are used, in twenty-four quart crates. The Michigan box does not answer, being nearly as deep as wide, and the freight handlers throw them on their sides, or bottom side up—he would not use them if furnished free. Refrigerator cars are used, with ice overhead, after the berries are first carefully cooled off. Finally he says, "we don't make as much money as we want to—there are too many strawberries."

The Lane & Bodley Co., Cincinnati, Ohio, established 1850, are the oldest and most extensive manufacturers of engines and saw mills in this country. The excellent quality of their work, fair dealing, and a liberal use of printer's ink has given them a good reputation and sale throughout the entire civilized world. We take pleasure in referring our readers to their announcement in another column of this issue.

Veterinary Department

Conducted by Prof. Robert Jennings, Veterinarian Surgeon. Professional advice through the columns of this Farmer is freely given to subscribers. The full name and address will be necessary that we may identify them as subscribers. The symptoms should be described in such a manner as to enable us to give a correct diagnosis. No questions answered professionally by mail unless accompanied by a fee of one dollar. Private address, No. 201 First St., Detroit, Mich.

Foot Rot and Foul in the Feet of Sheep.

ALBION, August 23rd, 1887.

Veterinary Editor of the Michigan Farmer.

Will you please tell me through the columns of the FARMER the difference between "foot rot" in sheep, and "foul foot," the full name and address will be necessary that we may identify them as subscribers. The symptoms should be described in such a manner as to enable us to give a correct diagnosis. No questions answered professionally by mail unless accompanied by a fee of one dollar. Private address, No. 201 First St., Detroit, Mich.

A SUBSCRIBER.

ANSWER.—To your first, "What is the difference between foot rot and foul foot?"

Hoof ail, or hoof rot is a specific disease, highly contagious, occurring in hot weather.

The first noticeable symptom is lameness in one or both front feet. Daily examinations of the feet show lesions in advance of lameness, first in slight erosions, attended with heat, indicating the presence of inflammation of the skin in the cleft of the foot immediately above the heels. The skin assumes a soft or macerated appearance, and is kept moist by the presence of a sanguous discharge from the ulcerated surface. The ulceration rapidly extends, a purulent fetid matter is discharged, the ulcers form sinuses, which penetrate deep into the fleshy sole. The bottom of the hoof is gradually eaten away by the acrid discharge and the outer walls separate from the flesh, leaving the entire foot a mass of black putrid ulceration. Second.—Not unless inoculated with poisonous discharge left upon the pasture, or in the yard, &c. Third.—The period of incubation has not been satisfactorily determined. Fourth.—Yes; when treatment is early resorted to. Treatment.—Cut away all loose fragments of horn, wash the feet well with castile soap and water, then set the feet in the following solution as hot as the animal can bear it: Sulphate of copper, pulv., alum, pulv., of each one ounce; willow charcoal, pulv., half an ounce. Mix all together and put in a half gallon of hot water. A stone crock is the best to steep the feet in. Keep the feet in the solution two or three minutes. Two or three soakings are usually sufficient to arrest the progress of the disease.

Split Hoof, "Sand Cracks."

SYLVESTER, August 23rd, 1887.

Veterinary Editor of the Michigan Farmer.

I have a valuable horse with sand cracks in both front feet, and have had plasters put on after the style recommended some time ago in the FARMER, and would like to know whether it is true or false, or joins in a disgraceful proceeding, simply to please the others. Who do the good people of this State do send their sons to the Agricultural College expect such principles to be instilled into them?

A SUBSCRIBER.

ANSWER.—Apply once a day to the hoofs the following ointment: White resin, six ounces; beeswax, one ounce; spirits turpentine, six ounces; tincture camphor, two ounces; linseed oil, six ounces. Melt all together in a water or sand bath.

Commercial.

DETROIT WHOLESALE MARKET.

DETROIT, September 3, 1887.

FLOUR—Market quiet, steady and unchanged. Quotations on car lots are as follows:

Michigan stone process.....	\$25	25	25
Michigan roller process.....	35	50	25
Michigan patent.....	40	45	25
Michigan extra.....	45	50	25
Minnesota, patents.....	45	50	25
Bry.....	20	30	25

WHEAT—The week closes with a depressed tone to the trade, although values on spot are slightly higher than a week ago. Up to Friday the market had been strong at advanced values, but a part of this advance was lost on Saturday. Business has been more active, and will probably improve further during the week. Closing prices on Saturday were as follows: Spot—No 1 white, Tsc; No 2 red, 74 1/4c; No 3 red, 73c. Futures—No 2 red, September, 74 1/4c; October, 75 1/4c; December, 75 1/2c. Some sales of No 2 white were made at 75c. White wheat is scarce and firm.

BARLEY—Sales of No 2 are reported at \$1 25 1/2c, and No 3 at \$1 15 1/2c per cental. Market quiet.

RYE—Quoted at \$4 45c per bu., with a quiet market.

FEED—By the car-load \$12 50c/12 50 per ton is quoted for bran. Middlings quoted at \$13 05 per ton.

BUTTER—Market easiest at about the same range as a week ago. Quotations are 22c for extra selections of dairy, 20c for choice, 18c for good, 16c for fair. Creamery is quiet and steady at 16c for fair.

CHEESE—Market higher, and quotations steady at 12c 1/2c for Michigan full creams; Ohio, 10c 1/2c; New York, 12c 1/2c.

EGGS—Fresh command 15c 1/2c per doz.

Receipts have been light, and the market is quiet.

DAIRY—Michigan, 80c per bbl. in car lots; eastern, 85c; dairy, 82 per bbl.; Ashton quarter sacks, 90c.

POULTRY—Market quiet, and prices generally lower. Quoted as follows: Live, 9c per lb.; roosters, 42c; hens, 70c; turkeys, 9c; ducks, 6c; spring chicks, 6c; pair, pigeons, 25c.

DRIED APPLES—Market firm at 6c to 7c for common, and 14c 1/2c for evaporated. Few offering.

SALT—Michigan, 80c per bbl. in car lots; eastern, 85c; dairy, 82 per bbl.; Ashton quarter sacks, 90c.

POTATOES—Offering increasing and market easier. Hail at \$20 25c per bbl.

ONIONS—Quoted at \$25 25c per bbl., and firm supply light.

POULTRY—Market quiet, and prices generally lower. Quoted as follows: Live, 9c per lb.; roosters, 42c; hens, 70c; turkeys, 9c; ducks, 6c; spring chicks, 6c; pair, pigeons, 25c.

HIDES—Green city, 60c 1/2c per lb., country, 65c 1/2c; cured, 80c; green calf, 70c 1/2c; salted do, 80c; sheep-skins, 20c 1/2c each; bulls, stag and grubby hides 1/2c off.

APPLES—Quoted at \$1 50c 1/2c per bbl., with a large supply.

PEARS—Stocks liberal. Bartletts quoted at \$3 50c 1/2c per bbl. and other varieties as to quality at \$2 00c 1/2c per bbl. Demand fair.

PRAACHES—In fair demand, with receipts fair from heavy. Quotations are as follows: Common yellow \$1 00c 1/2c; Crawford, \$1 50 25c; white, 75c 1/2c per bu. Crawford & F. 76 1/2c per bbl. baskets 25c 1/2c, outside for fancy.

PLUMS—Receipts show little or no improvement. The general supply is only fair and the market rules firm at \$2 00c 1/2c per bbl. in good part of western castle. The market opened up with a good demand, and for the better grades of stock the market was firm at last week's prices, common grades were a little dull and sold a shade lower.

GRAPES—There is an improved supply of Delaware and fancy varieties and a decline has taken place. Sales reported at \$2 00c 1/2c per bbl. Hartford and Ives were steady at 23c 1/2c and Concord at 24c 1/2c. The demand is moderate.

HUCKLEBERRIES—Quoted at \$5 25c per pound.

NOT much doing.

SWEET POTATOES—Steady at \$4 25c 1/2c per bbl. for Jerseys, and \$3 25c 1/2c per Baltimore and Delaware, per bu.

TOMATOES—Quoted firm. Per bu. 90c 1/2c.

CABBAGES—In fairly good inquiry at 9c 1/2c per head.

PROVISIONS—Clear pork is higher, as is bacon, while hams show a slight decline. Quotations here are as follows:

New meat.....	\$16 00	12 1/2c
16 50	12 1/2c	
17 00	13 1/2c	
Lard in barrels.....	12 1/2c	12 1/2c
Lard in kegs, 9c.....	6 1/2c	6 1/2c
Hams, 9c.....	12 1/2c	12 1/2c
13 1/2c.....	13 1/2c	13 1/2c
Choice bacon, 9c.....	11 1/2c	11 1/2c
Extra mess beef, per bbl.....	7 50	7 1/2c
Tallow, 9c.....	3 1/2c	3 1/2c

HAY—The following is a record of the sales at the Michigan Avenue scales for the past week, with prices per ton:

Mondays—31 loads: Eight at \$11 and \$10; five at \$12; two at \$14; \$10, \$12 and \$11 1/2c; one at \$9 and \$8.
Tuesday—41 loads: Nine at \$11; seven at \$10; five at \$12; four at \$14; \$11, \$10 and \$9; two at \$8 and \$7.
Wednesday—37 loads: Nine at \$10; six at \$10; four at \$12; three at \$13 and \$12; two at \$10 and \$9; one at \$8 and \$7.
Thursday—36 loads: Eight at \$11; seven at \$10; four at \$12; three at \$13 and \$12; two at \$10 and \$9; one at \$8 and \$7.
Friday—37 loads: Nine at \$10; six at \$10; four at \$12; three at \$13 and \$12; two at \$10 and \$9; one at \$8 and \$7.
Saturday—11 loads: Three at \$13 and \$12; two at \$14 and \$13; one at \$10 and \$9.

LIVE STOCK MARKETS.

At the Michigan Central Yards,

SATURDAY, Sept. 3, 1887.

CATTLE.

The receipts of cattle at these yards numbered 618 head, against 504 last week.

The proportion of State cattle was rather small, and for these there was a fair demand, at about last week's prices. The quality was rather poor on the whole, and it is hard to say what some really good cattle would bring in this market, for we have not had any on sale for a long time. The following were the closings:

QUOTATIONS:

Extra graded steers, weighing 1,300 lbs to 1,700 lbs.....

16 50

17 00

17 50

18 00

18 50

19 00

19 50

20 00

20 50

21 00

21 50

22 00

22 50

23 00

23 50

24 00

24 50

25 00

25 50

26 00

26 50

27 00

27 50

28 00

28 50

29 00

29 50

30 00

30